

消 防 處  
牌 照 及 審 批 總 區  
香 港 九 龍 尖 沙 咀 東 部 康 莊 道 1 號 5 樓  
消 防 總 部 大 廈



**FIRE SERVICES DEPARTMENT**  
**LICENSING AND CERTIFICATION COMMAND**  
FIRE SERVICES HEADQUARTERS BUILDING,  
5/F, No.1 Hong Chong Road,  
Tsim Sha Tsui East, Kowloon,  
Hong Kong.

本處檔號 OUR REF.: (9) in FP 314/07 V  
來函檔號 YOUR REF.:  
電子郵件 E-mail : <lepolic2@hkfsd.gov.hk>  
圖文傳真 FAX: 2367 3631  
電 話 TEL NO.: 2733 7744

24 March 2005

To: Authorized Persons  
Registered F.S.I. Contractors  
Registered Ventilation Contractor  
Registered Lift & Escalator Contractors  
Fire Insurance Association of H.K.  
The Association of Registered F.S.I  
Contractors of Hong Kong  
Structural Division, H.K.I.E.  
Power Companies

The H.K. & China Gas Co.  
The Lift & Escalator Contractors Association  
Pacific Century Cyber Works Limited  
Hong Kong Construction Association  
Director of Architectural Services  
Director of Buildings  
Director of Housing  
Petroleum Companies

Dear Sirs,

**FSD Circular Letter No. 1/2005**  
**New Arrangement for Submission of Fire Services Installation Plans**  
**for New Developments**

The existing arrangements for submission of Fire Service Installation (FSI) plans are specified in paragraph 3, Part I of FSD Circular Letters 1996. The process for the submission of FSI plans for new developments has been reviewed during the Departmental Business Study on fire service inspection and certification. In order to enhance the business-friendliness of FSD, a series of consultation with the trade and concerned professional bodies had been conducted. Subsequently, revised arrangements have been devised which will take effect on 1.5.2005.

The submission of Fire Service Installation (FSI) plans for all new developments is divided into two stages (i.e. Stages 1 and 2) as follows:-

/....P.2

### **Stage 1 - Design Stage**

When the fundamental design of the FSI is finalized, a duly completed form FSI/314 (rev.05) with attachment of the following documents shall be submitted to FSD for endorsement :

- Two sets of the FSI schematic drawing(s) (Preferably in A1 size and normally one sheet of FSI drawing for each FSI system of the building. One set of the drawing(s) shall be coloured.).
- A copy of the Fire Service Notes in the relevant approved building plans.

A full set of FSI layout plans is **not** required at this stage. The types of FSI, the details of the required information and contents to be included in the schematic drawings are specified in Appendix I to this circular. For the avoidance of doubt, the design principles of pressurization of staircase, ventilation/air conditioning control system and smoke extraction system should be submitted separately.

The design principles of the submitted schematic drawing(s) will be vetted and endorsed by FSD. A Fire Services Certificate (FS 161) will be issued if the design principles are found satisfactory. Both sets of drawings will be chopped “DESIGN PRINCIPLES OF FIRE SERVICE INSTALLATION CHECKED AND FOUND SATISFACTORY”, signed and dated by the plan processing officer of FSD. One copy will be returned to the Authorized Person or FSI Contractor/Consultant, as appropriate, and the coloured set retained for use by FSD. The target time for processing of these submissions is 20 working days from the date of receipt by this Department.

Any schematic drawings subject to vetting as above, but found unsatisfactory, will be returned to the Authorized Person or FSI Contractor/Consultant, as appropriate, without being chopped, together with the submitted form FSI/314(rev.05).

The Authorized Person and the FSI Contractor/Consultant may subsequently revise their designs at any time before Stage 2 provided that the target time for processing by FSD is observed. They will remain fully responsible for ensuring that the FSI provisions are in compliance with the relevant Rules and Codes of Practice, and are identical to those prescribed in the relevant approved general building plans.

## **Stage 2 – Submission of Detailed FSI Layout Drawings**

When acceptance inspection of the FSI is requested, the duly completed forms FSI/314 (rev. 05) and FSI/501 (rev. 05) with attachment of the following documents shall be submitted to FSD :

- Two sets of as-fitted FSI layout plans (One set of the drawings shall be coloured. Submissions can be dispatched by hand or by mail.).
- A schedule of the submitted FSI layout plans.

FSD will not vet nor endorse these as-fitted FSI plans. Both copies of plans will be stamped “AS-FITTED FIRE SERVICE INSTALLATION PLANS AS CERTIFIED BY AUTHORIZED PERSON AND FIRE SERVICE INSTALLATION CONTRACTOR / CONSULTANT (FOR ACCEPTANCE INSPECTION)”, no signature by FSD is required and only the date of receipt will be provided. One copy of the plans will be returned to the Authorized Person or FSI Contractor/Consultant, as appropriate, and the coloured set retained for use by FSD for the acceptance inspection. The target time for arranging the acceptance inspection remains 14 working days.

For the avoidance of doubt, submission of FSI/314(rev.05) for those types of FSI not included in Appendix I will bypass Stage 1 and go straight to Stage 2.

To cope with the above new arrangements, the revised forms FSI/314 and FSI/501 are attached in Appendices II and III for your attention. The new forms can be downloaded from FSD website : [www.hkfsd.gov.hk/home/eng/fsi\\_forms.html](http://www.hkfsd.gov.hk/home/eng/fsi_forms.html) The revised forms should be put in use for projects with FSI drawings submitted on or after 1.5.2005.

With effect from the same date, the current detailed check on FSI plans for all new developments handled by the New Projects Division will cease. In this regard, the guidelines contained in FSD Circular Letter 2/99 will be suspended on the same date. Furthermore, the old FSI/314 and FSI 501 forms as attached at FSD Circular Letters 3/99 and 11/97 respectively are to be replaced by the revised forms.

Except the target processing time will also be changed to 20 working days, other arrangements for FSI plans submitted to the following divisions will remain unchanged:-

- Railway Development Strategy Division
- Commercial Buildings and Premises Division

Full detailed checking will be carried out on all FSI plans submitted to these divisions and those for improvised sprinkler systems.

In order to gauge the effectiveness and efficiency of this new arrangement, the above procedures will be put on trial for 6 months from the effective date of this circular.

Yours faithfully,

(LO Chun-hung)  
for Director of Fire Services

**Types of FSI to be included in the schematic drawings submitted to FSD in Stage 1:-**

- Automatic fixed installation other than water
- Automatic fixed installation using water
- Deluge system
- Drencher system
- Dust detection system
- Fire alarm system
- Fire detection system
- Fire hydrant/hose reel system
- Fixed foam system
- Ring main system with fixed pumps
- Sprinkler system
- Street fire hydrant system
- Water spray system

**Information to be included in FSI schematic drawings**

**A. Drawing List, Block plan, Abbreviation, Legend and General Notes**

1. Location plan
2. Fire Service notes for FS installation including sprinkler system, FH/HR system, AFA system, DTL, portable equipment and etc.

**B. Sprinkler System**

1. Hydraulic calculation, if such approach is adopted.
2. Symbols, abbreviations, notes, and relevant standard adopted for system design, etc.
3. Water supply source, size of in-feed pipe to sump tank, transfer pumps flow rate, and size of up-feed pipe to FS tank, etc.
4. Classification of hazard group of sprinklers installation.
5. Pressure/flow performance characteristics of sprinkler pumps and jockey pump.
6. Levels between floors.
7. Nos. of sprinkler heads for each zone.
8. Water storage capacity of sprinkler water tank.
9. Intermediate booster pumps similar to the FH/HR system for buildings with level difference between sprinkler inlet and topmost sprinkler over 60 m.
10. Clarification on the height between the highest sprinkler and the lowest sprinkler/alarm valve of each installation.
11. Indication clearly on whether water supply is “single end feed or both end feed”.
12. Indication clearly if “negative suction head design” being adopted.

**C. FH/HR System / Street FH System**

1. Symbols, abbreviations, notes, etc.
2. Self-priming for intermediate booster pumps.
3. Sizes of hose reel/hydrant horizontal main pipe, risers, pipes feeding individual hose reel and header pipe connecting F.S. inlets.
4. Intermediate booster pumps for FH/HR installation where topmost hydrant height exceeds 60 m above FS inlet.
5. Water storage capacity of FS tank.

**D Ring Main System with Fire Pumps**

1. Symbols, abbreviations, notes, etc.
2. Number of fire pumps, its capacity.
3. Hydraulic calculation, pressure and flow
4. Sizes of the hydrant outlets, pipeline, control valve, etc.
5. Water source and its capacity, infill rate, etc.
6. Other FSI connecting to the system.

**E. Fire Detection System / Gas Detection System /Dust Detection System**

1. Symbols, abbreviations, notes, and standard adopted for system design, etc.
2. Provision of direct telephone link to Fire Services Communication Centre.
3. the number of detectors, call points and alarm bells in each zone showing in table(s)
4. Audio/visual advisory system and the related P.A. system.
5. Types of electric cables connecting different system components.

**F. Automatic Fixed Installations other than Water**

1. Symbols, abbreviations, notes, location of the area to be protected, and standard adopted for system design, etc.
2. System calculations.
3. Detailed operations including the integration with the AFA system and dampers.

**G. Drencher System / Deluge System / Water Spray System**

1. Symbols, abbreviations, notes, location of the area to be protected, and standard adopted for system design, etc.
2. Hydraulic calculations.
3. Water tank capacity.
4. Water supply source and size of in-feed pipe.
5. Type of automatic operation system.
6. Size of main pipe and riser.

FSI/314 (Rev.05)

To : Director of Fire Services

Fire Service Installation \*Schematic Drawings / As-Fitted Layout Drawings  
for Building at

.....  
.....

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Part I

This is to certify that the attached fire service installation plans are identical to the building plans approved by you on ..... Your file reference is FP 8/.....  
(\* A copy of the F.S. Notes for the relevant approved building plans is attached)

Signed..... Date.....  
Full Name of Authorized Person.....

Part II

This is to certify that the details and specifications of all installations shown on the attached fire service installation plans are as prescribed by the Fire Services Department and in accordance with the relevant Rules and Codes of Practice as listed below :-

- Rules of the Fire Offices' Committee for –
    - Automatic Sprinkler Installations (29<sup>th</sup> Edition)
    - Automatic Fire Alarm Installation (12<sup>th</sup> Edition)
    - Installation of External Drenchers (4<sup>th</sup> Edition)
  - Rules of the Loss Prevention Council for –
    - Automatic Sprinkler Installations
    - Automatic Fire Alarm Installations
  - Codes of National Fire Protection Association for –
    - Carbon Dioxide Extinguishing Systems (Standard 12)
    - Clean Agent Fire Extinguishing Systems (Standard 2001)
    - Water Spray Fixed Systems for Fire Protection (Standard 15)
  - Code of Practice for Minimum Fire Services Installations and Equipment,  
Fire Services Department
    - Fire Alarm Systems
    - Fire Hydrant/Hose Reel Systems
  - Others .....
- .....

Signed..... Date.....  
Full Name of FSI Contractor/Consultant.....  
Correspondence Address.....  
.....Tel. No. :.....

- Mark "x" where applicable
- \* Delete where appropriate

Section 21(6)(d) of Buildings Ordinance  
-Application for Inspection and Testing of  
Fire Service Installations and Equipment

To : Director of Fire Services

Date :.....

FP Ref. no. 43/8/ .....

43/19/20/ .....

Description of Fire Service Installations/Equipment :

Part A :

The above installations/equipment have been installed at (address of premises).....  
.....and the installation work was completed on ..... I hereby certify that such installations/equipment in accordance with the FSI \*schematic drawings endorsed on ..... and as-fitted layout drawings have been inspected and are in efficient working order. \* Copies of FSI as-fitted layout drawings, completed checklist, equipment test reports and catalogue/data sheets are attached herewith for your information.

Signature of  
FSI Contractor :.....

Name in Full :.....

Office/Chop :..... Registration no. :.....

Tel. :..... Class :..... Date :.....

Part B :

I, ....., Authorized Person, certify that the above installations have been installed in accordance with the approved building plans stamped by FSD on ..... and, in my opinion they are ready for inspection.

The Fire Service Completion Advice from Water Supplies Department in respect of Fire Service Installations (\*Copies attached) requiring Government water mains connection has been \*issued/applied for.

\*An undertaking letter/memo from building owner for providing 24 hour attendant service with normal telephone provision pending the connection of direct telephone link for the fire service installation(s) is attached herewith.

I request that a \*Certificate FS172, required under S21(6)(d) of the Buildings Ordinance/acceptance memo/letter be issued to me. I can be contacted on telephone no. .... for collection of the certificate.

I also certify that the building gross floor area as defined under the Buildings Ordinance is .....m<sup>2</sup> and the type of building is domestic/non-domestic.

Signed :.....  
Full Name of  
Authorized Person : .....

Office :.....

Date :.....

Tel. :.....

\*Delete where appropriate